

המחלקה למתמטיקה, בן-גוריון

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## גאומטריה אלגברית ותורת המספרים

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ביום רביעי, 28 בדצמבר, 2016

בשעה 15:10 – 16:30

ב-101 Math

ההרצאה

### **theory invariant geometric via algebras Hopf**

תינתן על-ידי

(Hamburg) Meir Ehud

תקציר:



**Ben Gurion University - Mathematics**  
**Algebraic Geometry and Number Theory Seminar**

*Speaker*    **Ehud Meir (Hamburg)**

*Title*        **Hopf algebras via geometric invariant theory**

*Date*        Wednesday, 28 December 2016

*Time*        15:10 – 16:30 (starts 15:10 sharp)

*Location*   Room -101 in Building 58

Hopf algebras are an algebraic structure which appears in many areas of mathematics (such as representation theory, algebraic topology and operator algebras, to name a few).

They can be considered as a generalization of a group to the non-commutative geometry setting. Their classification, however, even in group theoretical terms, is at present out of our reach.

*Abstract*    In this talk I will describe an alternative approach for studying Hopf algebras, by using tools from geometric invariant theory.

By applying some classical results, I will show why the study of finite dimensional semisimple Hopf algebras can be reduced into studying some scalar invariants.

I will then describe how these invariants relate to questions in Hopf algebra theory, and will describe an application to Hopf orders.

If time permits, I will also describe other applications of geometric invariant theory in this direction.

(updated 1 Dec 2016)